

REMARKS

In accordance with the above amendments, claims 26 and 38 have been canceled, claims 27, 36-37 and 39-40 have been amended and claims 28-33 and 42 have been withdrawn from consideration. All claims canceled or withdrawn from consideration have been done so without prejudice and applicants reserve the right to pursue such claims in continuing or divisional applications. Thus, claims 22-25, 27, 36-37 and 39-41 remain under consideration in this application. No claim stands as having been allowed.

The first full paragraphs on pages 9 and 13 have been rewritten to correct typographical errors. It is believed these corrections should overcome the objections to the disclosure enumerated in item 2 of the Official Action.

The objection to claim 38 under 37 C.F.R. 1.75(c) is believed to have been rendered moot by the cancellation of that claim.

The amendments to claims 36 and 37 are believed to overcome the rejections under 37 U.S.C. §112. The "desired level of mechanical properties" has been amended to -- sufficient physical workability -- and (wt.) has been added to the percentage N in claim 36. In claim 37, (wt.) has been added (that is, has been added as necessary) and in line 1 of part (b), "non-energetic" has been added to define the plasticizer.

The rejection of claim 36 under 35 U.S.C. §102(b) based on Pluniguian (USPN 3451883) is believed also to have been met by removing the reference to "diisobutyl adipate" from claim 36.

The rejection of claims 22-27, 34-38 and 40 under 35 U.S.C. §103(a) as being unpatentable over Dunigan et al. (USPN 3711343) in view of Elrick (USPN 4029529) and Plunguian (USPN 3451883) and Yunan (USPN 5187320) is respectfully traversed. It is noted that at page 7 of the Action, 12.6%N is stated as being greater than 13.15%N as claimed. This is not understood. The formula of the present invention is not claiming a higher percentage of nitrocellulose in the formulae but, instead, uses nitrocellulose having a higher percent of N, which Dunigan et al. does not disclose.

In the Advisory Action (May 26, 2006), the Examiner refers to Pluniguian at column 4, lines 7-19, which discloses nitrocellulose grades having varying percentage amounts of nitrogen (N). That passage, however, does not teach or suggest any relationship between the percentage of nitrogen and the relative effect or efficiency of particular plasticizers. The generalization in the reference that one grade may be preferred for particular purpose or another does not suggest the claimed combination by any means. The knowledge that there have existed various grades of nitrocellulose based on the percentage nitrogen is known. The reference suggests that a grade having about 12% N would generally be preferred. It does also state that a grade

having up to 13.5% N would be preferred for combustible cartridge cases. While interesting, none of this discloses any significance regarding the efficiency and advantages of using particular plasticizers with particular grades of nitrocellulose. It mentions neither solubility nor the solution of solubility or plasticizing problems with particular grades of nitrocellulose. The reference does also disclose a long list of possible plasticizers without reference to combinations with particular grades of nitrocellulose. This leaves hundreds of possible combinations to be explored. Nothing is disclosed that would lead one to the claimed combination without an inventive step.

As indicated, none of the references recognize or suggest that the plasticizers of the present invention have particular significance with respect to efficiently plasticizing relatively high nitrogen nitrocellulose which is insoluble in the conventional solvent for nitrocellulose (ether). It has been discovered that the material is readily dispersed by relatively small amounts of the plasticizers of the invention (which are less toxic than those conventionally used) in combination with acetone.

Likewise, the rejection of claims 39 and 41 under 35 U.S.C. 103(a) as being unpatentable over the above-combination of four patents further in view of Dillehay et al. (USPN 5565150) is also respectfully traversed. The addition of Dunigan et al. is not believed to overcome the basic deficiencies in the combination of

art cited with respect to the other claims, as the present claims are believed to be fundamentally patentable over the combination of references cited.

In view of the above amendments taken together with the remarks herein, applicants request that the present amendment be entered and the objections and rejections be reconsidered and withdrawn.

Should minor issues remain which, in the opinion of the Examiner, can be resolved by a telephone interview, she is asked to contact the undersigned attorney at his convenience to discuss in an attempt to resolve same, thereby expediting prosecution of this application.

Respectfully submitted,
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